



Remediation Roundtable

June 22, 2021





Remediation Roundtable Agenda

Updates

- ▶ Release-Based Clean Up Program Regulation Development Updates
- ▶ PFAS Action Plan and Legislative Update
- ▶ Potable Water Updates: Well Completion Reports & Salt Impacts
- ▶ New Form III Verification
- ▶ Remediation Standard Regulations Q and A



Announcements

DEEP "New Normal" Information (ct.gov)

DEEP's Records Center

- ▶ Public access to DEEP's records center at 79 Elm Street, Hartford will be available to a maximum capacity of 12
- ▶ Recommend you [schedule an appointment online](#) ahead of time to confirm your spot on any given day
- ▶ Please reference the [DEEP Records Center](#) webpage for additional details including hours of operation.



Announcements

- We will now accept those documents requiring a fee to be submitted electronically without having to send in the full paper copy
- ❖ Fees will still need to be submitted in hardcopy to the Central Processing Unit (CPPU)
 - For Property Transfer Forms- submit payment with the [Property Transfer Fee Form](#)
 - For other Documents with a fee please submit payment with the cover sheet/first page of the document
 - Don't forget to upload the entire document through the SFT website
- Reminder: Please use the most recent Electronic Transmittal form found on our webpage: [Transmittal of Documents \(ct.gov\)](#)



Web Updates

- ▶ [Release-Based Cleanup Program Stakeholder Engagement](#) - updated with Concept papers
 - ▶ [Discovery of Historical Releases Concept Paper](#)
 - ▶ [Reporting Newly-Discovered Historical Releases Concept Paper](#)
 - ▶ [Characterization of a Discovered Historical Release Concept Paper](#)
 - ▶ [Immediate Removal Actions Concept Paper](#)
 - ▶ [Tiers Concept Paper](#)
- ▶ DEEP is seeking your feedback regarding these Concept Papers. Please submit comments to DEEP.Cleanup.Transform@ct.gov by close of business on **Tuesday, July 6, 2021**
- ❖ Many valid email addresses were purged from the Remediation eAlert list. If you didn't get an eAlert about Release-Based Concept Papers on 6/14/21, please [resubscribe](#) to that list serv



Web Updates

Various updates to the [Verification Web pages](#):

- ▶ Verifications must be submitted with the [Electronic Document Transmittal Form](#) as the cover page, followed by the Verification form, and then the Verification Report
- ▶ Revised Remediation Standard Regulations and Environmental Use Restriction Regulations were adopted on February 16, 2021. DEEP is revising the Verification Forms. Until those forms are available, please complete the [Verification Addendum Form](#) and attach it to the Verification Form
- ▶ [LEP Verification Audit Program Fact Sheet](#) has been updated with our covid/“new normal” audit procedures
- ▶ [Verification Form Instructions](#) web page – NEW!



Web Updates

- ▶ [Remediation Standard Regulations](#) – Unofficial versions of RSRs continue to be updated with footnotes and updated features to help navigate the document easier
- ▶ [Environmental Use Restrictions](#)
New Environmental Use Restriction Forms:
[EUR Annual Inspection Form](#)
[EUR Factsheet](#)



EUR Forms Update

- ▶ Forms in final editing process based on feedback
 - ✓ Form for Allowable Disturbance, Release or Termination from Environmental Use Restriction (Release Form)
 - ✓ Temporary Release for Recurring Activities Template
- ▶ Forms still needing input from EPOC and CBA
 - ▶ EUR Opinions and Overview - provided 6/2/21
 - ▶ EUR Submittal Form - sent over today 6/22/21
 - ▶ Declaration Templates – sent over today 6/22/21



Questions or Comments?

Please type your Questions into CHAT

If we need further clarification we may
take you off mute to speak

www.ct.gov/deep/remediationroundtable

Release-Based Clean Up Program Regulation Development Updates

June 22, 2021
Graham J. Stevens
Remediation Roundtable



Connecticut Department of Energy and Environmental Protection

Release-based Cleanup Program

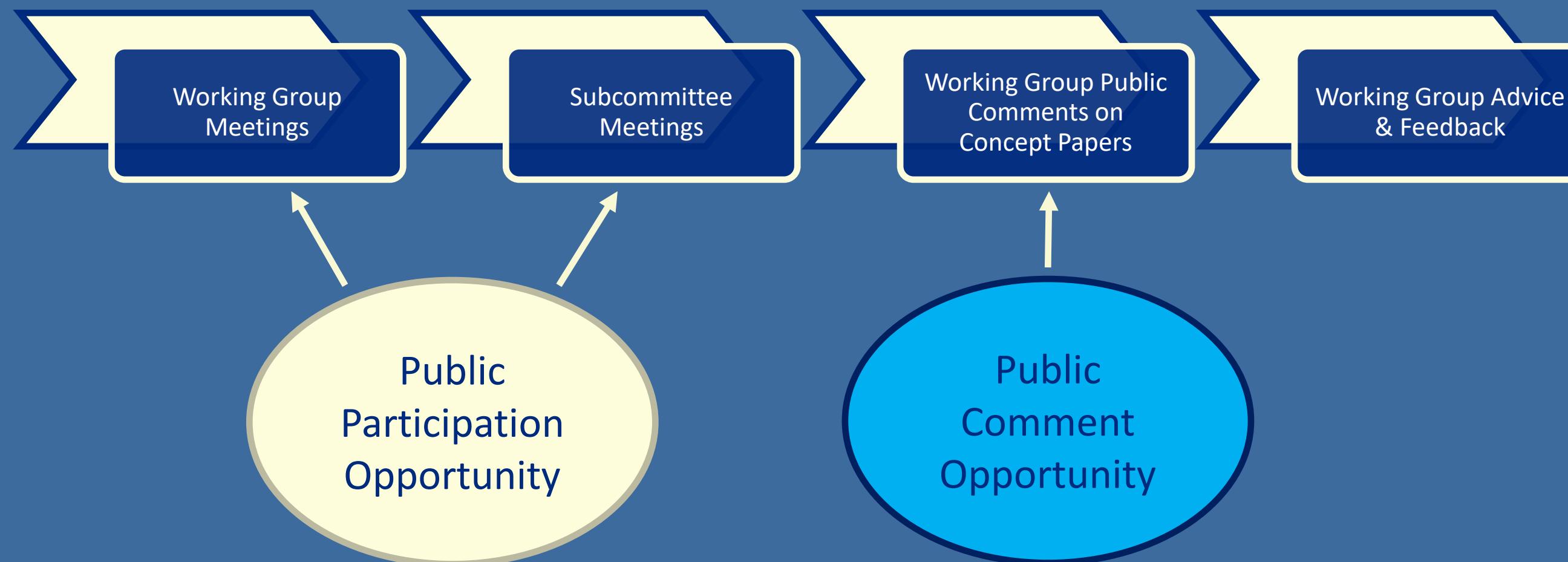
Update:

- First-Phase Subcommittees submitted Concept Papers on June 11th
- Public comment open until July 6th
<https://portal.ct.gov/DEEP/Remediation--Site-Clean-Up/Comprehensive-Evaluation-and-Transformation/Release-Based-Cleanup-Program-Stakeholder-Engagement>
- Working Group to provide Advice & Feedback to DEEP by October 26th



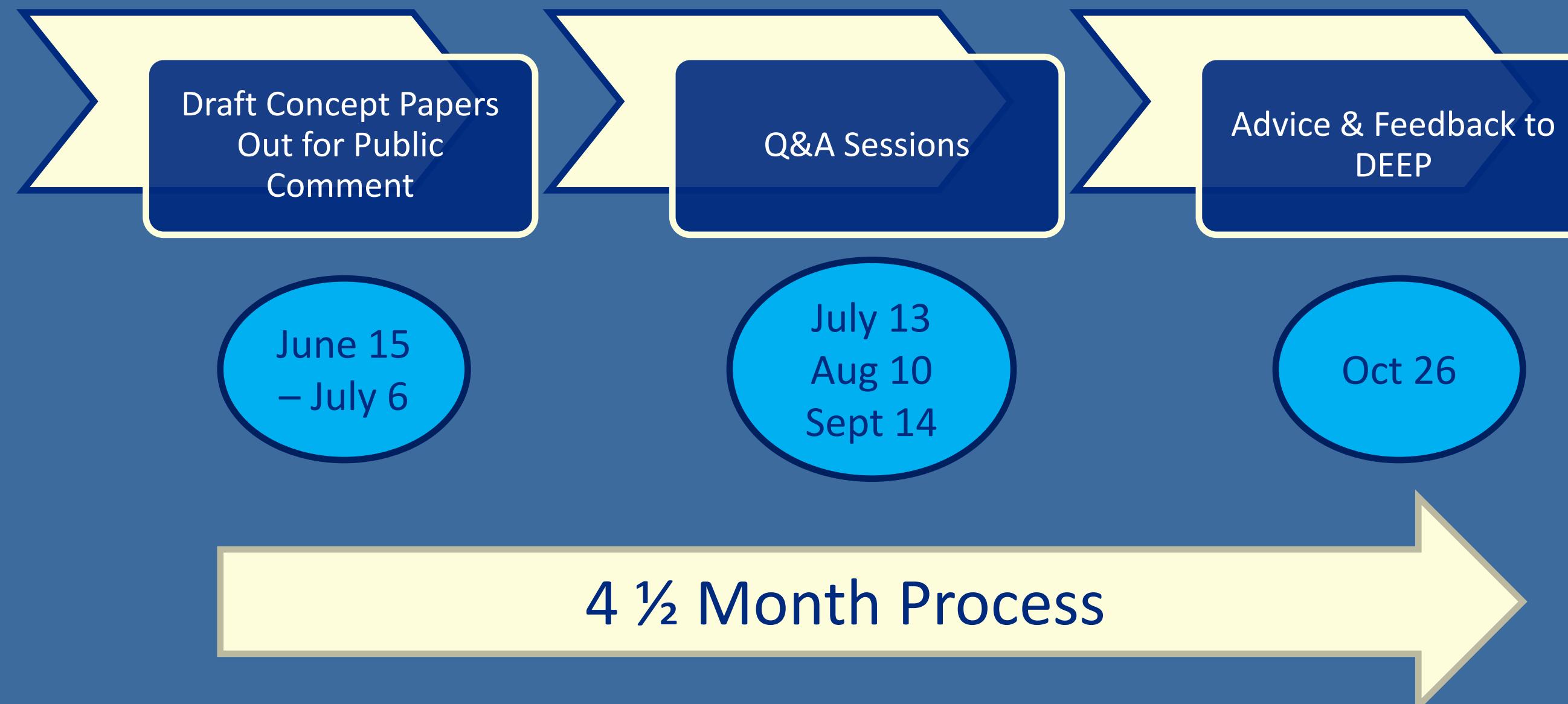
Work Group – Subcommittee Process

First Phase Subcommittee Process



Working Group – Advice & Feedback

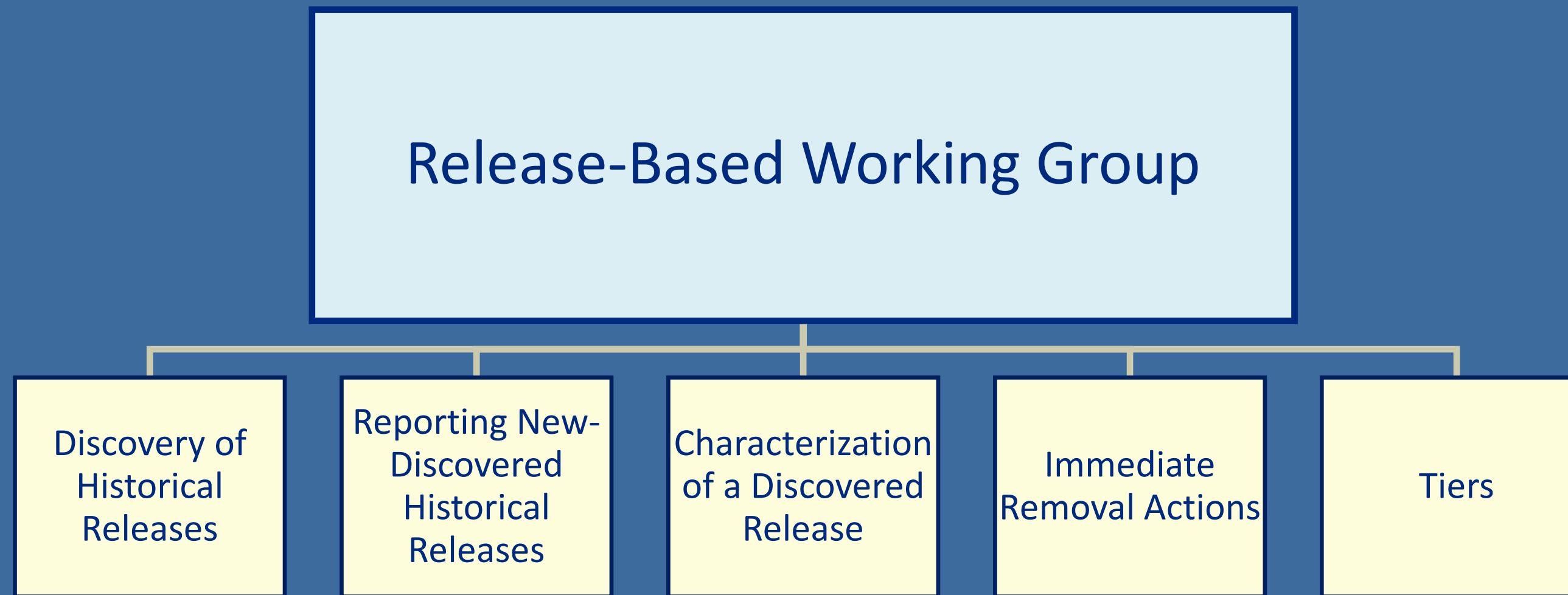
First Phase Subcommittee Process



Transparency – Meetings Show Formulation of Advice and Feedback

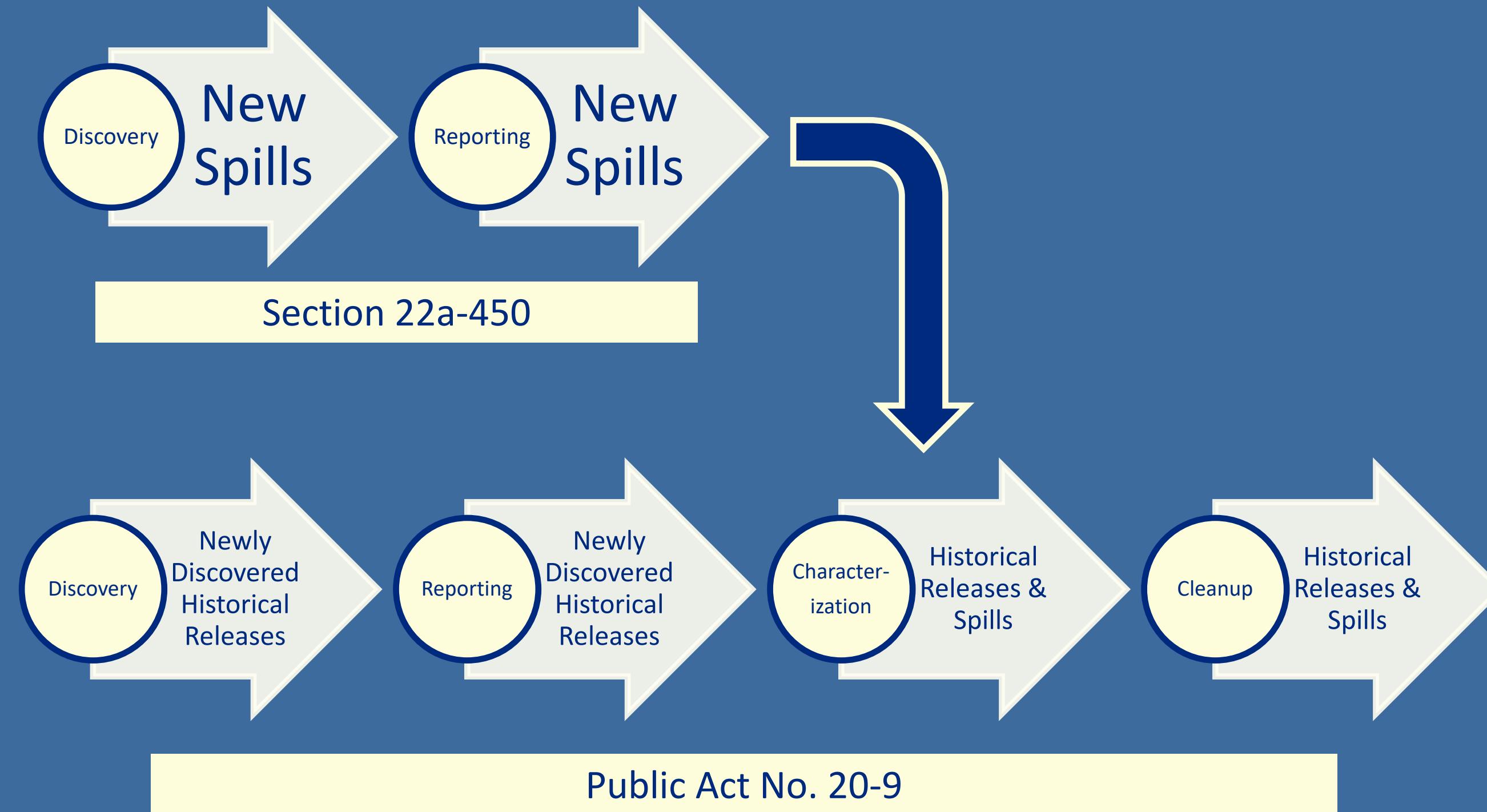


Subcommittees Topics

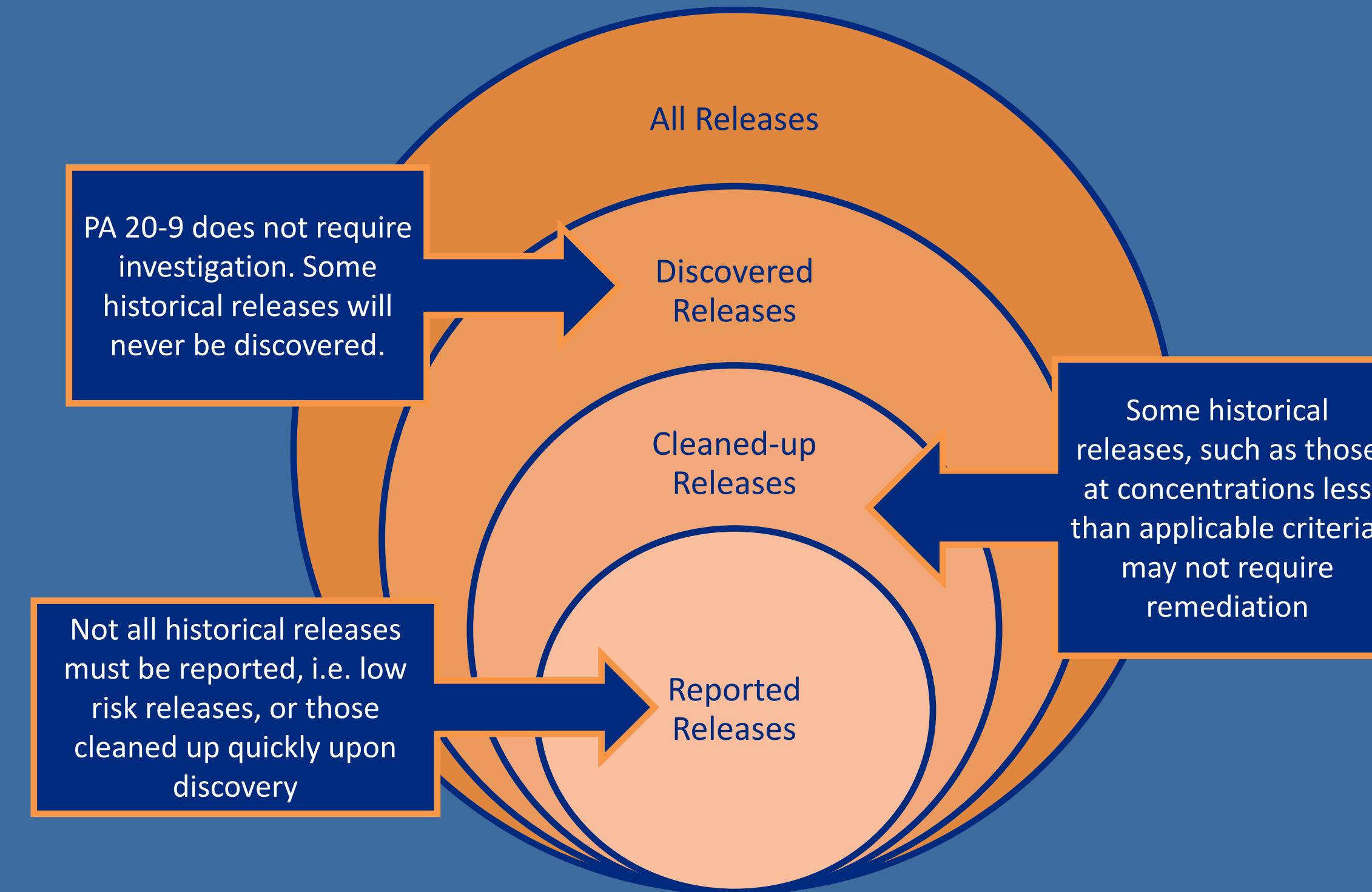


Connecticut Department of Energy and Environmental Protection

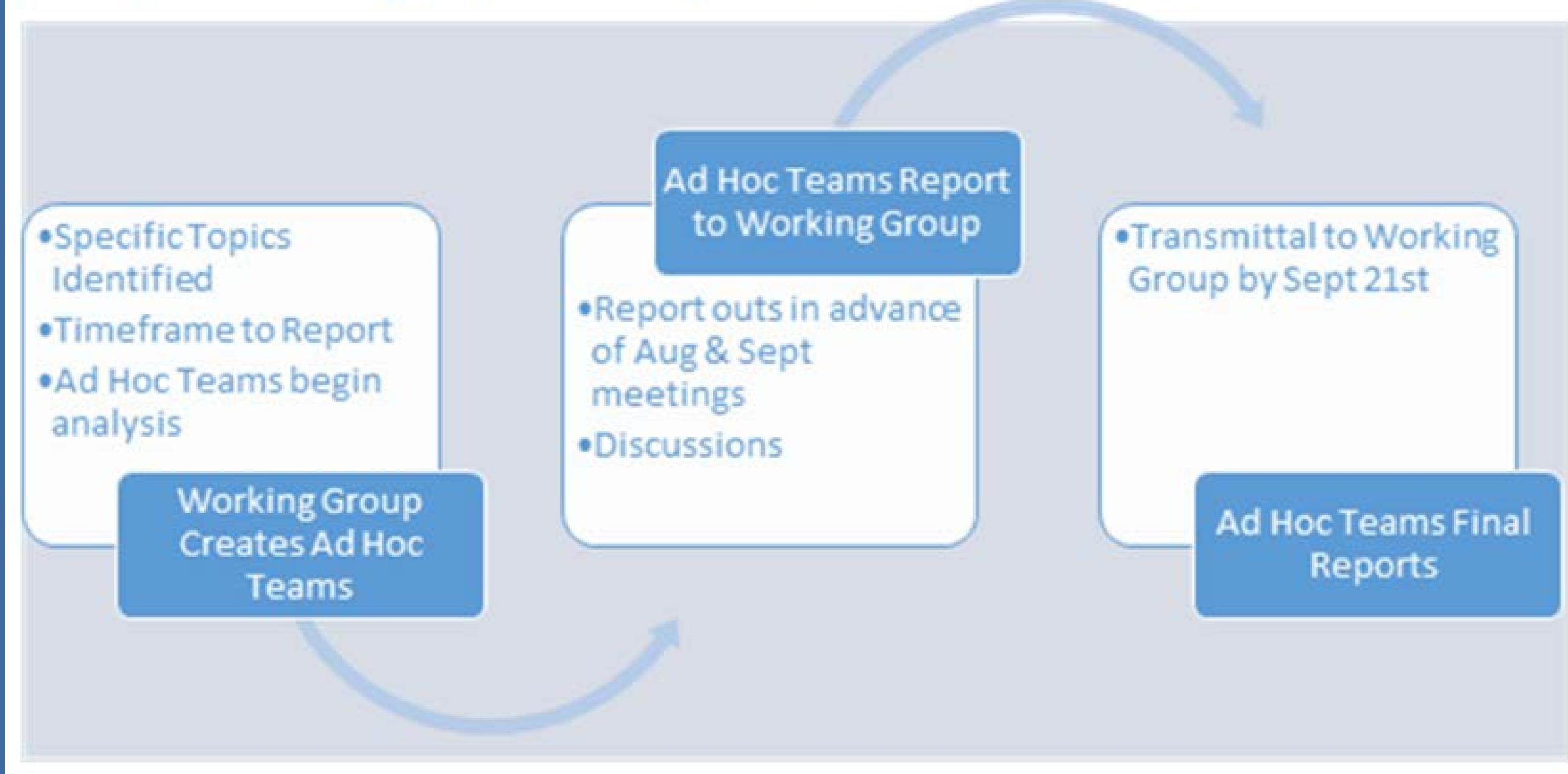
Process Map – Subcommittee Topics



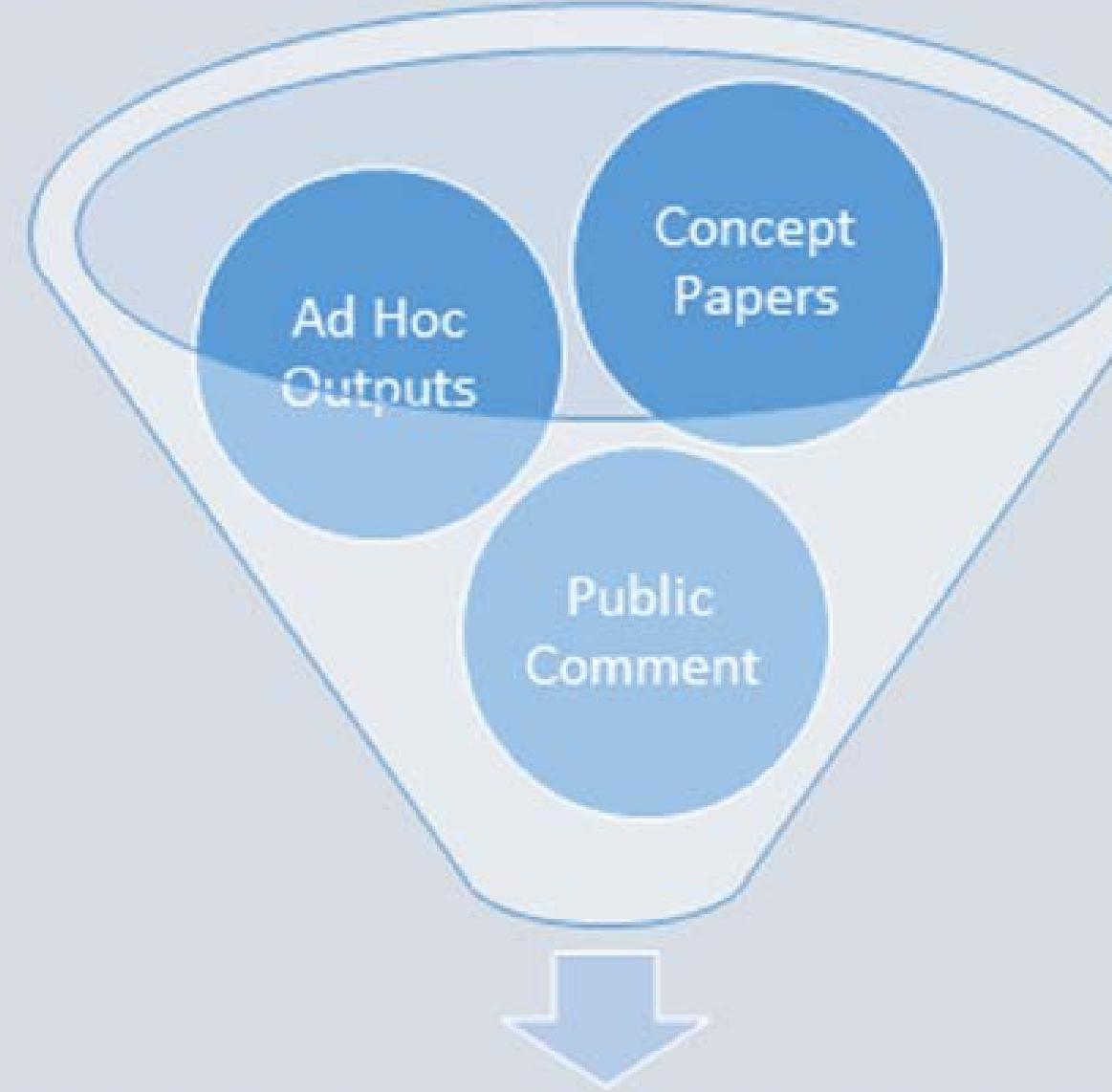
Universe of *Historical* Releases



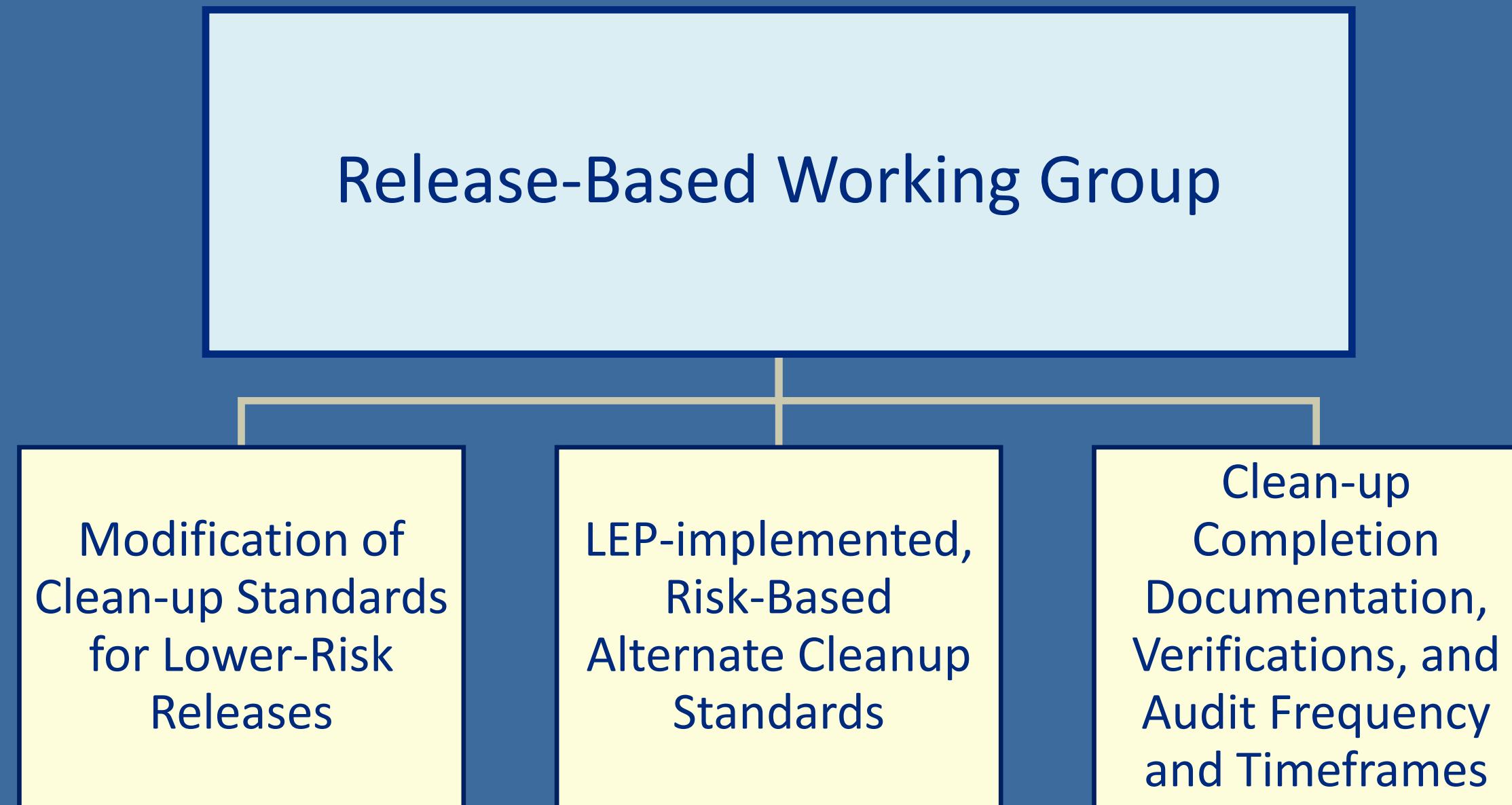
Analysis – Small Teams Tackle Discrete Topics (topic and gap analysis)



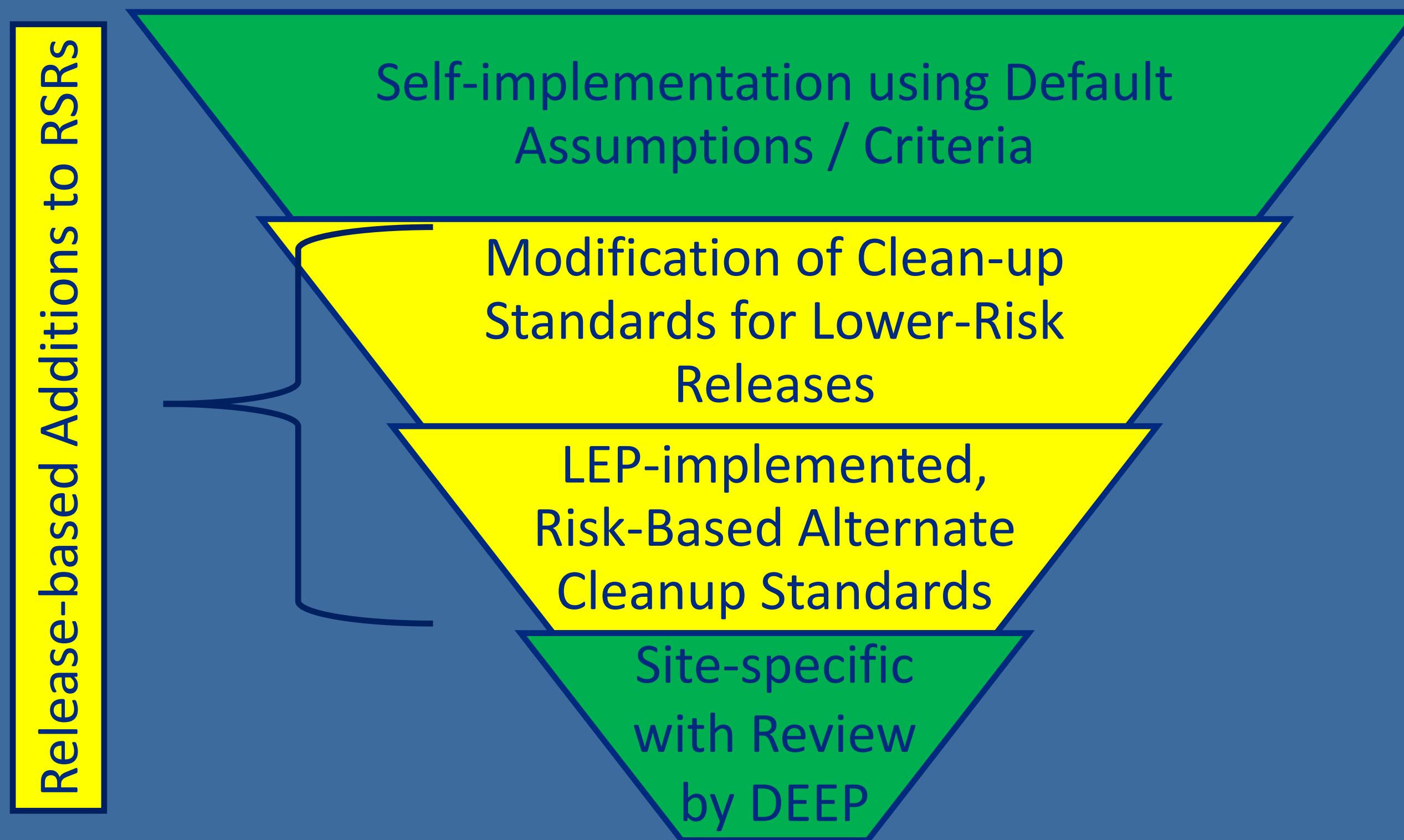
Production – Working Group and Drafting Team Weave Together Concept Papers and Ad Hoc Teams' Outputs



Draft Second Phase Subcommittees



Cleanup Regulations – Start with RSRs



Release-Based Working Group

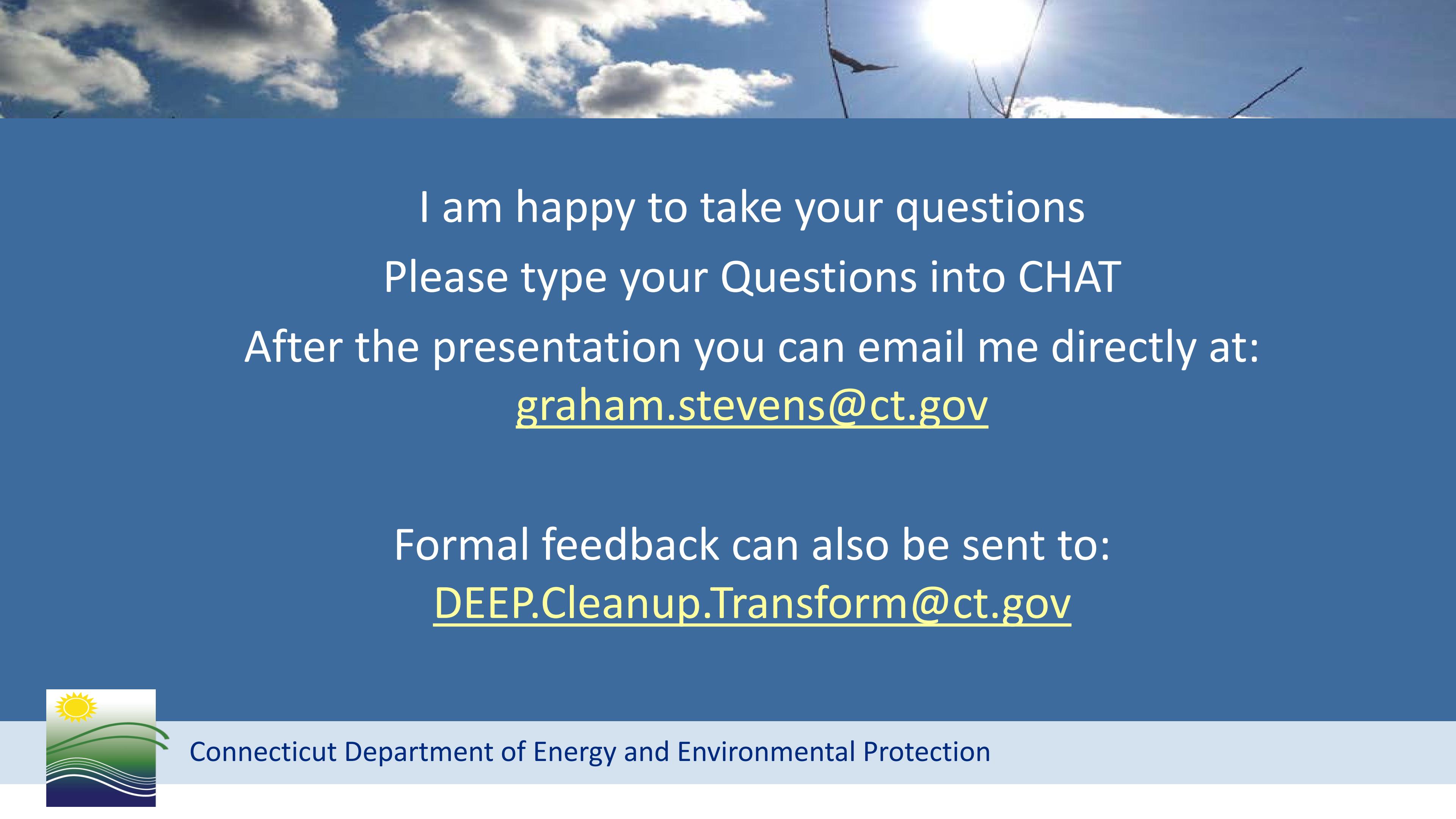
Stay engaged:

- The statutory Working Group meets the second Tuesday of each month from 1 pm to 2:30 pm
- Public participation is encouraged
- Recordings of past meetings posted online along with other materials

<https://portal.ct.gov/DEEP/Remediation--Site-Clean-Up/Comprehensive-Evaluation-and-Transformation/Release-Based-Clean-Up-Program-Regulation-Development>



Connecticut Department of Energy and Environmental Protection



I am happy to take your questions
Please type your Questions into CHAT
After the presentation you can email me directly at:
graham.stevens@ct.gov

Formal feedback can also be sent to:
DEEP.Cleanup.Transform@ct.gov



Connecticut Department of Energy and Environmental Protection

REMEDIATION ROUNDTABLE – 6/ 22/ 2021

PFAS Action Plan Update

Speakers: Ray Frigon, Shannon Pociu, and Anna Hagstrom, CT DEEP Remediation Division



2021 LEGISLATIVE UPDATE – PFAS Bills

SB 837

- Bans **AFFF** use for training/testing upon passage & for firefighting beginning Oct. 2021
 - Airports: fixed-systems deadline Oct. 2023 (meanwhile, containment measures)
 - Select other facilities (e.g., chemical plants, terminals): extensions available
- Directs DEEP to identify take-back program for municipal **AFFF**
- Bans in-state sale of PFAS-containing food packaging by manufacturers/ distributors beginning Jan. 2024

HB 6666

- Requires annual PFAS testing by water bottlers that utilize DPH-approved sources (beginning by Jan. 2022)
- Authorizes DPH to **prohibit** use of bottled water sources with PFAS levels above DPH Action Level

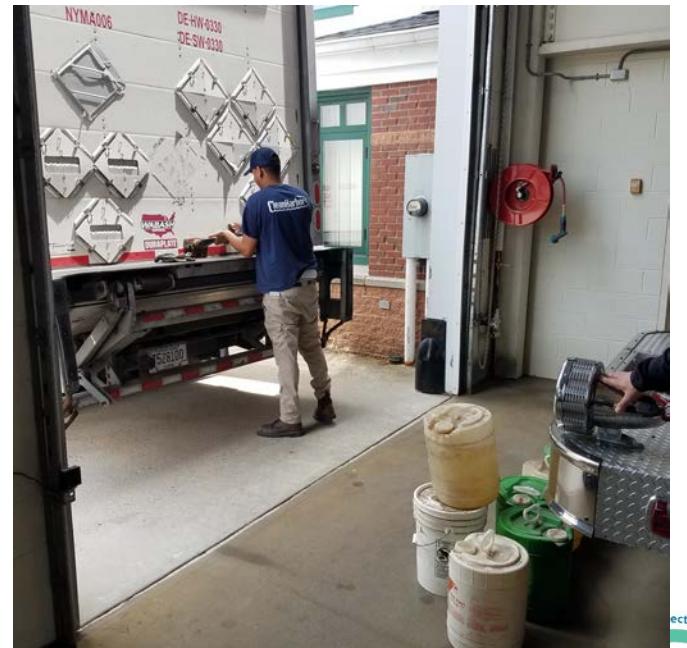
2021 LEGISLATIVE UPDATE – PFAS Funding

Public
Act
21-111

- \$ 1.15 M/ year bond allocation for FY 2022 and FY 2023
- Grants-in-aid to municipalities for:
 - Provision of potable water
 - Assessment and remedial action to address PFAS pollution

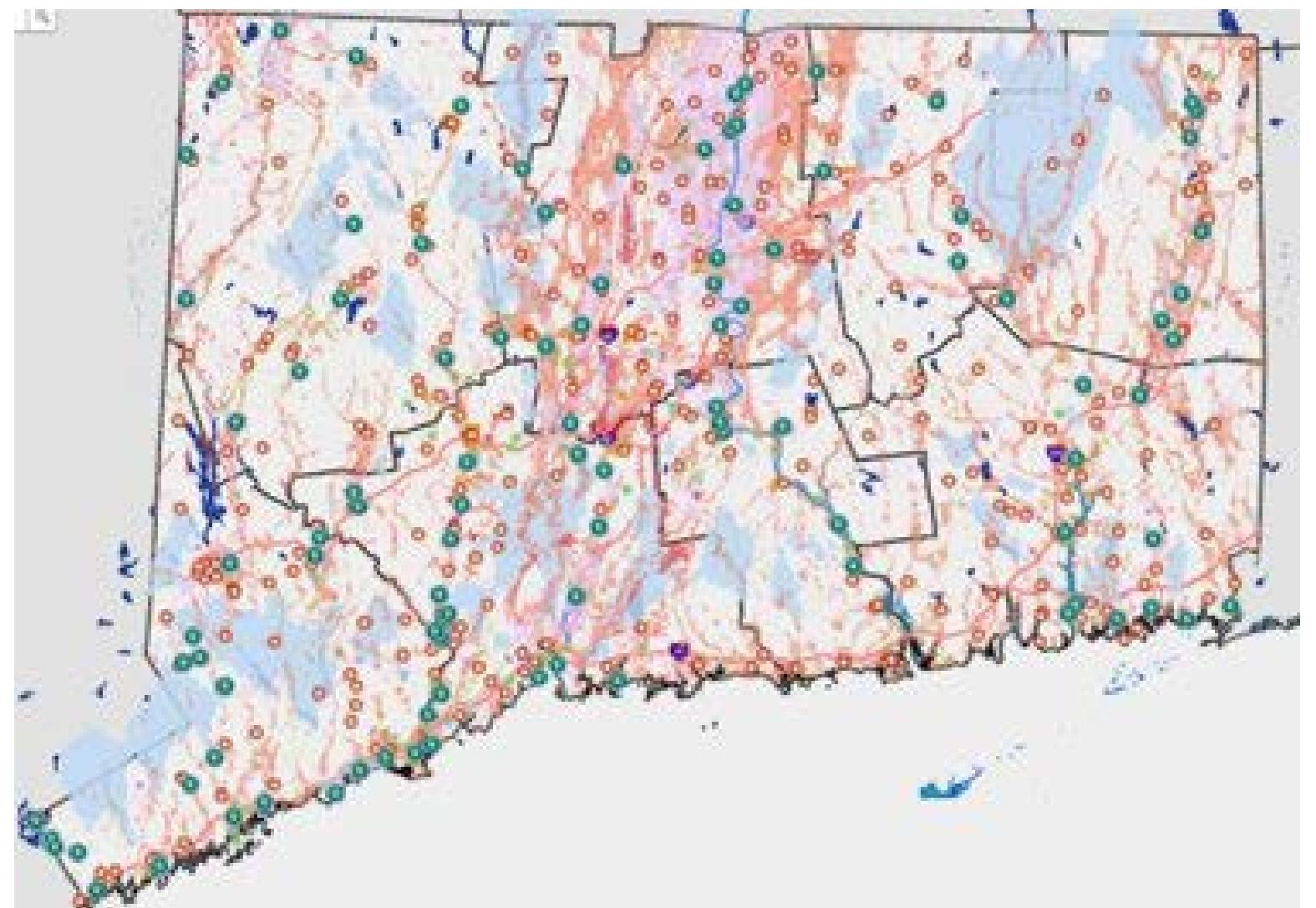
AFFF TAKE-BACK PROGRAM

- Collaborative effort between DEEP & DESP, Supported by \$2M bond
 - ✓ PFAS-free foam selected by DESPP with DEEP input: Feb. 5, 2021
 - ✓ Take-back program initiated for state/ municipal AFFF concentrate (est. 40,000 gal)
 - ✓ Phase 1 – Container collection and storage/ disposal: Launched in May 2021
 - Phase 2 – Decontamination study: Summer 2021 (finalizing proposal selection)
 - Phase 3 – Remove AFFF from and decontaminate apparatus: Fall 2021



ONGOING PFAS PROJECTS – GIS Project

- **GIS updates (wrapping up)**
 - Comprehensive mapping of potential PFAS generators/ sites and sensitive receptors such as public and private drinking water supplies and surface water/ fisheries
 - Intended use: Inform planning for future PFAS testing



NEW PFAS PROJECTS – Potable Water Testing

■ Killingworth

- CTWater Co. alerted DPH of PFAS in Beechwood Community Well System
- Nearby Town buildings and 2 schools sampled
- DEEP sampling surrounding private wells
 - Approx. 70 private wells tested so far
 - 13 wells exceed DPH Drinking Water Action Level – bottled water provided, treatment systems pending
- Source investigation pending

■ Upcoming testing

- Known AFFF deployment site in Central CT
- Nearby community water system detected PFAS
- DEEP and DPH to test private wells potentially impacted by use of AFFF during emergency response



NEW PFAS PROJECTS – POTW Testing

- Approx. 1/3 of in-state POTWs (34)
 - Timeline: Summer 2021
 - Influent, effluent, sludge, and scrubber water (for the four POTWs with incinerators)
 - Surface water and fish tissue samples in select receiving waters
 - Firm selected after proposal review



NEXT STEPS FOR DEEP

✓ AMBIENT & SURFACE WATER PROTECTION CRITERIA

Remediation Standard	APS Criterion*
Residential Direct Exposure Criterion	135 mg/ kg
Industrial/ Commercial Direct Exposure Criterion	41 mg/ kg
GA Pollutant Mobility Criterion	14 μ g/ kg
GB Pollutant Mobility Criterion	14 μ g/ kg
Groundwater Protection Criterion (Adopts DPH Drinking Water Action Level)	70 ng/ L
Surface Water Protection Criterion	In Development

*Applies to Σ [PFOA, PFOS, PFHxS, PFNA, PFHpA]

✓ GUIDANCE ON ANALYSIS OF NON- DRINKING WATER MATRICES

- LC-MS/ MS with isotope dilution
- Laboratory compliance with criteria in Table B-15 of the DoD Quality Systems Manual

✓ SUPPLEMENTAL BID FOR PFAS ANALYSIS

- To include additional matrices

QUESTIONS ?

[DEEP PFAS Webpage](#)
[PFAS Task Force Webpage](#)
[CTPFAS Action Plan](#)

Contact Information:

Raymond.Frigon@t.gov
Shannon.Pociu@t.gov
Anna.Hagstrom@t.gov





Potable Water Updates

Well Completion Reports & Salt Impacts

Veronica Tanguay, Environmental Analyst

DEEP Remediation Division

Remediation Roundtable

June 2021

Well Completion Reports

Where and how to find them

Well Completion Reports

Completion Date	Report Location
1950 (approx.) -1970	DEEP File Room at 79 Elm St
1970-2016	Dept. of Consumer Protection FTP Website: ftp://ftp.ct.gov/dcp/Well_Drilling_Permits/ <i>*Follow directions on DCP website to access FTP</i>
2016-2020	Hard copies at DCP HQ or DEEP File Room
1950-2020	Local Health Departments may have on record
NEW Filings (as of January 2021)	NEW! online DCP Database: Well Drilling Completion Reporting (ct.gov)

DEEP Investigations into Salt-Impacted Private Wells

Recorded salt impacts, Potential salt sources, Remediating and reducing salt impacts, Legislative actions, Reporting a complaint

State-wide Salt Impacts

Tracking

Includes cases addressed by:
DOT, Local Health Depts, &
DEEP

Current Impacts

183 total known as of January 2021

Yearly Complaints

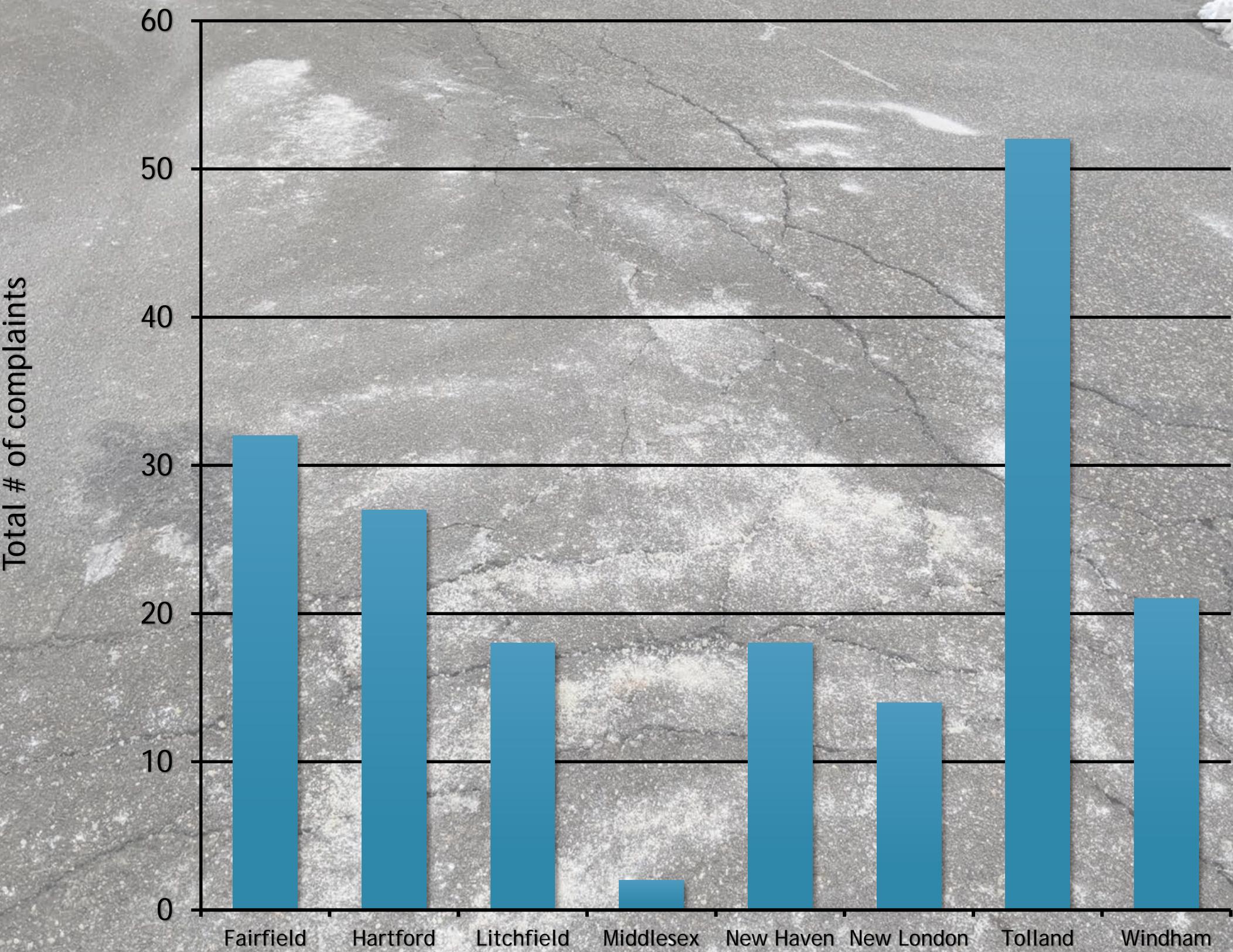
Since 2015 yearly average new complaints received = 25

Criteria

Cl > 250 mg/L - CT DPH MCL

Na > 100 mg/L - CT DPH Guidance Level

Complaints by County



Not Just Road Salt?

Potential Ion Exchange Impacts



What's the problem?

Monitoring potential impacts from Ion Exchange Unit (water softener)



Possible impacts from

- Older units that utilize more salt (>1 - 40lb bag/month)
- Backwash set on timers vs. water usage (i.e. "on demand")
- Backwash discharges are concentrated brines (need to carefully consider discharge location)
 - Backwash sample collected chloride >400 mg/L



Caveat

Ion exchange is best existing technology for treating hardwater and naturally occurring minerals such as iron and manganese

Remediating Salt Impacts

- ▶ Each case is unique, no “one-size-fits all” approach guaranteed success
- ▶ Multiple approaches may be required
 - ▶ Road & stormwater drainage repairs and improvements
 - ▶ Installation of new wells with deeper set casing
 - ▶ Current data from DOT indicates 80 ft of casing into bedrock working best
 - ▶ Upgrading outdated ion exchange treatment systems/changing treatment system (*depends on water quality*)
 - ▶ Whole-house RO system
 - ▶ Cost prohibitive (~\$15,000-35,000)
 - ▶ Requires using significant volume of water (4 gallons wastewater: 1 gallon clean water)

The key is...

Reducing Salt Impacts

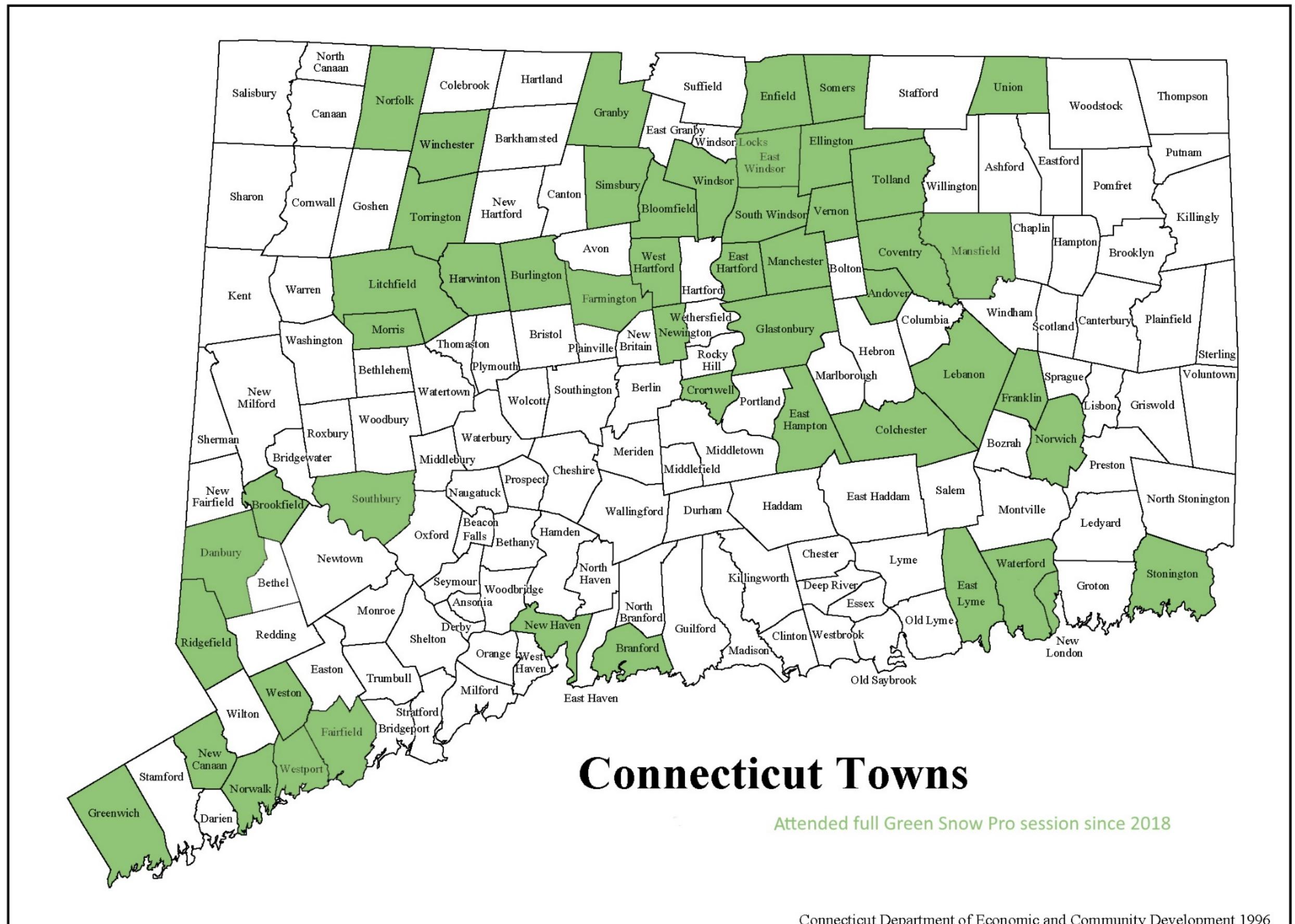
- ▶ Decrease salt application rates/volumes in municipalities
- ▶ Use of brines vs. road salt products
- ▶ Decrease salt applications in parking lots & sidewalks
- ▶ Increasing public awareness of the concerns & actions they can take
 - ▶ Decrease personal salt usage on sidewalks & driveways
 - ▶ If applicable, upgrade treatment systems to newer volume-based technology, or
 - ▶ Switch to other non-salt-based treatments *depending on water quality*



Green Snow Pro
Training

Green Snow Pro Training

- ▶ Offered at UCONN's T2 Center
- ▶ An Elective Workshop under the CT Road Scholarship Program
- ▶ Green Snow Pro BMPs Guide



Legislative Activities: Road Salt

- ▶ Senate Bill 1031: An Act Concerning the use of sodium chloride to mitigate ice and snow accumulations
 - ▶ Bill did not make it out of the House
- ▶ Next step actions
 - ▶ DEEP, DOT, UCONN, & DPH workgroup to establish next steps to address road salt impacts and discuss potential legislative language for next session

How to Report a Complaint?

- ▶ Location of property of impacted well
 - ▶ Adjacent to State Road
 - ▶ [CT DOT Environmental Compliance Section](#)
 - ▶ Adjacent to Town Road
 - ▶ Local Health Department
 - ▶ Impacts Cl >250 mg/L and Na >100 mg/L refer to DEEP
 - ▶ Questions can be addressed to [DEEP.PotableWater@ct.gov](#)

Questions?

New Form III Verification (Property)

Kevin Vanderveer
Environmental Analyst
Remediation Division



Connecticut Department of Energy and Environmental Protection

Form Structure

I

General information

- Establishment address, LEP and certifying party info

II

Verification information

- Effective date, Rem #'s, certifications

III

Setting and receptors

- Environmental setting, abutting land uses, sensitive receptors, supply wells, vapor intrusion, ecological risk, significant environmental hazards



Form Structure

IV

Compliance history and approvals

- Previous verifications, public notice, approvals/notices

V

Standards for soil remediation

VI

Standards for groundwater remediation

VII

Appendices

- Public notice, approvals/notifications, EUR fact sheet and certificate of title



Connecticut Department of Energy and Environmental Protection

Additional Features

- E-instructions 
- Auto-fill header (address and Rem #)
- Drop-down lists & combo controls
- Radio buttons
- Internal links
- Red text



Going Forward

- Working on revising additional verification forms beginning with other Form III forms
- Call or email if you have questions about sections on the new form

DEEP.Verifications@ct.gov



Connecticut Department of Energy and Environmental Protection

Questions

After this presentation further questions about sections on the new form can be directed to:

DEEP.Verifications@ct.gov



Connecticut Department of Energy and Environmental Protection



Wave 2 RSRs Q&A

Carl Gruszczak
Environmental Analyst
Northwest District
Remediation Division



Unofficial Versions of RSRs

- ▶ Available on our website on the [RSRs Webpage](#)
- ▶ “Indented” version of current regulations that is much easier to read/navigate
- ▶ “Red/Blue version showing the old/new language
- ▶ “Living documents” (updating with footnotes)
- ▶ Updated Contents button on PDF viewer, so easier to navigate



Planned Format for this Q&A

Will cover some previously submitted questions
(some of those asked thru EPOC as well as others)

Plan to answer questions submitted thru the Zoom
Chat at the end
(so please submit chat questions starting now)



Questions Submitted thru EPOC

- ▶ Will answer some of those RSR questions here
- ▶ Will be providing written answers (in Q&A document) on our website for all the questions (still in development/review)
- ▶ Plan is for the Q&A to be a “living document” (will add answers as needed)
- ▶ Q&A organized by the same order as the RSRs (w/ EURs at the end)



Units “Issues”

Many of the comments/questions received were on units in tables:

- ▶ Will not be discussing them here, but added footnotes (where needed) in unofficial versions of the RSRs
- ▶ Will try to get them officially updated/fixed in the future



Volatilization Criteria for 111TCA

The Residential VolC for 111TCA should be 6,500 µg/L (is listed as 650 µg/L):

- ▶ Footnote was added to “unofficial” versions of the RSRs on the website
- ▶ Will approve 6,500 µg/L as Alt. VolC until it can be fixed



Forms - Notices

Many questions have been received about forms “prescribed by the Commissioner”:

- ▶ Notices for use of RSR provisions can be done at Verification (so using Verification Form)
- ▶ [Electronic Document Transmittal Form](#) can also be used for notices (select “Notification Required by the RSRs”)
- ▶ Be sure to provide whatever documentation is required



Forms cont'd - Requests

Requests are handled similarly:

- ▶ [Electronic Document Transmittal Form](#) is to be used for requests (select the proper request category – should be one for every provision)
- ▶ Be sure to include whatever documentation is required
- ▶ Provision specific forms are being developed (where appropriate – many provisions will just use generic form)



Target Indoor Air Concentrations (TACs)

TACs are necessary to compute the new Alt. Groundwater Protection Criteria (GWPC) for volatile substances:

- ➡ The intention is to provide the TACs on a Fast-Track Form
- ➡ Currently being reviewed internally and with Department of Public Health (DPH)
- ➡ Will be able to propose other criteria for review



Background Definition

What was intended by the phrase “minimally affected by human influences”?

- ▶ Intended to allow for non-point source (from off-site activities) concentrations to be considered part of background
- ▶ Came from definition of “natural” in the Water Quality Standards (WQS) to better align the two regulations



NAPL Variance

The new non-aqueous phase liquid (NAPL) variance requires compliance with the groundwater criteria. Where does that compliance need to be demonstrated?

- ▶ Compliance needs to be demonstrated for any plumes based on the requirements of the different GW criteria (GWPC, VolC, SWPC)
- ▶ Will be more useful in GB areas



Reuse of Polluted Soil

Why does the “natural soil” subsection of the soil reuse section refer to “polluted soil”?

- ▶ The soil section of the RSRs deals with the remediation of polluted soil from a release area
- ▶ The first line of the section reads “Any soil excavated from or treated at a release area during remediation shall be managed as follows:”
- ▶ So, subsection applies to polluted soil that has been treated to be natural soil



Chat Questions

Please continue to type your Wave 2
RSR Questions into CHAT

If we need further clarification, we
may take you off mute to speak

www.ct.gov/dep/remediationroundtable

A large, vibrant photograph of a coastal landscape. The foreground shows green fields and rocky shorelines. The middle ground is dominated by a large body of water with blue and green hues. The background features distant hills or mountains under a clear sky.

Remediation Roundtable

Next meeting: October 5, 2021